

ABSTRACT

2m sets (m being a natural number of 2 or more; and m = 2 in embodiments) of teeth (31b to 34b) and 2m-1 slots (41, 42, 43) are disposed alternately in an axial direction; those of windings (36, 37, 38) accommodated in the slots (41, 42, 43), which are each accommodated in the slots (41, 42, 43) spaced apart by m from each other, are connected in line, so that exciting directions are opposite; and phases of magnetic fluxes passed through the teeth (31b to 34b) are displaced by $360^\circ/2m$ from one another. Therefore, a thin and high-powered claw pole motor can be produced by disusing a portion of the winding which does not contribute to a torque (i.e., a crossover portion) and commonly using a magnetic path in each phase through return passes (31a to 34a). Moreover, a magnetic circuit of a wave winding motor is formed and hence, the output torque can be increased, as compared with a salient pole concentrated winding motor.